

Response to Notice of Non-Compliant Amendment

Applicant: Craig D. Sunada et al.

Serial No.: 10/016,746

Filed: Oct. 30, 2001

Docket No.: 10991022-8

Title: INNER PAPER GUIDE FOR MEDIA SHAPE CONTROL IN A PRINTER

1-13. (Cancelled)

14.-26. (Cancelled)

27. (Previously Presented) A media handling system for handling sheets of media, the media handling system comprising:

a pick roller structure configured to selectively contact and pick a media sheet from an input source;

a drive roller structure spaced from the pick roller structure;

a first guide structure longitudinally extending continuously from the pick roller structure to the drive roller structure;

a second guide structure longitudinally extending between the pick roller structure and the drive roller structure to define a media path between first and second guide structures, the media path defining a media entrance adjacent the pick roller structure and a media exit adjacent the drive roller structure; and

wherein the media path constrains the movement of a trailing edge of the media sheet as the trailing edge leaves the pick roller structure to minimize trailing edge print defects.

28. (Currently Amended) ~~The media handling system of claim 27~~ A media handling system for handling sheets of media, the media handling system comprising:

a pick roller structure configured to selectively contact and pick a media sheet from an input source;

a drive roller structure spaced from the pick roller structure;

a first guide structure longitudinally extending continuously from the pick roller structure to the drive roller structure;

a second guide structure longitudinally extending between the pick roller structure and the drive roller structure to define a media path between first and second guide structures, the media path defining a media entrance adjacent the pick roller structure and a media exit adjacent the drive roller structure; and

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wherein the media path constrains the movement of a trailing edge of the media sheet as the trailing edge leaves the pick roller structure to minimize trailing edge print defects, wherein the first and second guide structures are separated by a distance, the distance between the first and second guide structures being greater at the media exit than at the media entrance wherein the distance between the first and second guide structures increases gradually from the media entrance to the media exit.

29. (Currently Amended) The media handling system of claim ~~27~~28, wherein the distance between the first and second guide structures is between 0.5 mm and 5 mm.

30. (Currently Amended) The media handling system of claim ~~27~~28, wherein the pick roller structure includes a plurality of spaced pick roller wheels.

31. (Previously Presented) The media handling system of claim 30, further comprising:
a plurality of pinch wheels corresponding with the plurality of pick roller wheels, each of the plurality of pinch wheels corresponding with and positioned with respect to a corresponding pick roller wheel to create a nip between the respective pick roller wheel and the pinch wheel;
and

wherein the second guide structure is arranged to constrain and support the media sheet at regions between the nips to reduce stress exerted on the media sheet at the nips.

32. (Currently Amended) The media handling system of claim ~~27~~28, wherein the pick roller structure is configured to pick the media sheet from the input source in a first direction and to rotate the media sheet such that the media sheet exits the pick roller structure traveling in a second direction.

33. (Previously Presented) The media handling system of claim 32, wherein the first direction is opposite the second direction.

34. (Previously Presented) The media handling system of claim 32, further comprising:

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an input guide corresponding with the pick roller structure to guide the media sheet at least partially around the pick roller structure.

35. (Currently Amended) The media handling system of claim 2728, wherein the first and second guide structures each linearly extend between the pick roller structure and the drive roller structure.

36. (Currently Amended) The media handling system of claim 2728, wherein the first and second guide structures are positioned with respect to the pick roller structure such that the media sheet exits the pick roller directly into the media path.

37. (Cancelled)

38. (Currently Amended) The media handling system of claim 3747, wherein the first guide structure defines a continuous surface extending entirely between the pick roller structure and the drive roller structure for supporting the media sheet.

39. (Currently Amended) The media handling system of claim 3747, wherein the second guide structure defines a continuous surface extending between the pick roller structure and the drive roller structure.

40. (Currently Amended) The media handling system of claim 3747, wherein the first and second guide surfaces each linearly extend between the pick roller structure and the drive roller structure.

41. (Currently Amended) The media handling system of claim 3747, wherein the pick roller structure is configured to pick the media sheet from the input source in a first direction and to rotate the media sheet such that the media sheet exits the pick roller structure traveling in a second direction.

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42. (Previously Presented) The media handling system of claim 41, wherein the first direction is opposite the second direction.

43. (Currently Amended) The media handling system of claim ~~37~~47, further comprising:
an input guide corresponding with the pick roller structure to guide the media sheet at least partially around the pick roller structure.

44. (Currently Amended) The media handling system of claim ~~37~~47, wherein the second guide structure extends at least partially over the drive roller structure.

45. (Currently Amended) The media handling system of claim ~~37~~47, wherein the pick roller structure defines an outer roller surface that interacts with the media sheet, the first guide structure defines a first guide surface that interacts with the media sheet, and the first guide surface is contiguously positioned with respect to the outer roller surface.

46. (Currently Amended) The media handling system of claim ~~37~~47, wherein the first guide structure is positioned with respect to the pick roller structure to continuously support the media sheet as the media sheet exits the pick roller structure and enters the media path.

47. (Currently Amended) ~~The media handling system of claim 37~~ A media handling system for handling sheets of media, the media handling system comprising:

a pick roller structure configured to selectively contact and pick a media sheet from an input source;

a drive roller structure spaced from the pick roller structure;

a first guide structure longitudinally extending between the pick roller structure and the drive roller structure;

a second guide structure longitudinally extending between the pick roller structure and the drive roller structure spaced from the first guide structure to define a media path between first and second guide structures; and

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wherein the media sheet exits the pick roller in the media path, the distance between the first and second guide structures constraining the movement of a trailing edge of the media sheet as the trailing edge leaves the pick roller structure to minimize trailing edge print defects, wherein the media path forms a media entrance abutting the pick roller structure and a media exit adjacent the drive roller structure, wherein the first guide structure is spaced from the second guide structure a greater distance at the media exit than at the media entrance.

48. (Previously Presented) The media handling system of claim 47, wherein the first guide structure is spaced from the second guide structure a distance between 0.5 mm and 2.9 mm at the media entrance.

49. (Previously Presented) The media handling system of claim 47, wherein the distance between the first guide structure and the second guide structure gradually increases between the media entrance and the media exit.

50. (Previously Presented) The media handling system of claim 47, wherein the first guide structure is spaced from the second guide structure a distance between 2.5 mm and 5 mm at the media exit.

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Any inquiry regarding this Communication should be directed to either Robert D. Wasson at Telephone No. (360) 212-2338, Facsimile No. (360) 212-3060 or Steven E. Dicke at Telephone No. (612) 573-2002, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

Respectfully submitted,

Craig D. Sunada et al.,

By their attorneys,

DICKE, BILLIG & CZAJA, PLLC
Fifth Street Towers, Suite 2250
100 South Fifth Street
Minneapolis, MN 55402
Telephone: (612) 573-2002
Facsimile: (612) 573-2005

Dated: May 13, 2004
SED:jan

Steven E. Dicke
Steven E. Dicke
Reg. No. 38,431

CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 13 day of May, 2004.

By Steven E. Dicke
Name: Steven E. Dicke